UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/920,995	08/01/2001	Hdei Nunoe	2000.023	5812

7590 08/12/2004		EXAMINER
WIND RIVER SYSTEMS		ANYA, CHARLES E
Legal Department, Attn: Patents		

ART UNIT	PAPER NUMBER
2126	

DATE MAILED: 08/12/2004

WIND RIVER SYSTEMS
Legal Department, Attn: Patents
500 Wind River Way
Alameda, CA 94501

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

	Application No.	Applicant(s)
Office Action Summary	09/920,995	NUNOE, HDEI
	Examiner	Art Unit
	Charles E Anya	2126

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>01 August 2001</u>.

2a)☐ This action is **FINAL.**   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle,* 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-7_ is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1-7_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

DETAILED ACTION

1.   Claims 1-7 are pending in this application.

Claim Rejections - 35 USC § 103

2.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

3.   **Claims 1-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over**

U.S. Pat. No. 6,529,985 B1 to Deianov et al. in view of U.S. Pat. No. 6,658,571 B1

to O'Brien et al.

4.   As to claim 1, Deianov teaches a method, comprising: when the current

processing mode is a privileged processing mode, executing a direct program flow

control instruction to directly access an instruction within software having the privileged

processing mode (Col. 6 Ln. 39 – 45) and when the current processing mode is an

unprivileged processing mode, executing an indirect program flow control instruction to

cause execution of the instruction within software having the privileged processing

mode (Col. 6 Ln. 5 – 26).

5.   Deianov is silent with respect with determining a current processing mode of an

executing software function.

6.   O'Brien teaches determining a current processing mode of an executing software

function (Col. 7 Ln. 27 – 48, Col. 9 Ln. 37 – 40).

7.   It would have been obvious to one of ordinary skill in the art at the time the

invention was made to combine the teachings of O'Brien and Deianov because the

system of O'Brien would improve the system of Deianov by controlling access to system

resources (Col. 7 Ln. 41- 44).

8.   As to claim 2, Deianov teaches the method of claim 1, wherein the direct

program flow control instruction is a jump instruction (Col. 6 Ln. 39 – 45).

9.   As to claim 3, Deianov teaches the method of claim 1, wherein the indirect

program flow control instruction is an interrupt instruction (Col. 6 Ln. 5 – 15).

10.   As to claim 4, Deianov teaches the method of claim 1, wherein the software

having; the privileged processing mode is operating system software (Interception

Module 111 Col. 5 Ln. 63 – 67, Col. 6 Ln. 1 – 4).

11.   As to claim 5, Deianov teaches the method of claim 4, wherein the software

having; the privileged processing mode is kernel software (Interception Module 111 Col.

5 Ln. 63 – 67, Col. 6 Ln. 1 – 4).

12.   As to claim 6, Deianov teaches a method, comprising: identifying a program code segment implementing an access to a memory area to be executed within a privileged processing mode (Interception Module 111 Col. 5 Ln. 63 – 67, Col. 6 Ln. 1 – 4), replacing the program code segment with a substitute code segment; wherein the substitute code segment includes program code to identify a current processing mode of the program code segment (Col. 6 Ln. 16 – 37), execute a direct program flow control instruction if the current processing mode is the privileged processing mode (Col. 6 Ln. 39 – 45), and execute an indirect program flow control instruction if the current processing mode is an unprivileged processing mode (Col. 6 Ln. 5 – 26). Also see the rejection of claim 1.

13.   As to claim 7, Deianov a software application, comprising: software code implementing application functionality and a smart system call into an operating system figures 1/2/3, Col. 8 Ln. 11 – 28), wherein the smart system call comprises software code to identify a current processing mode of the program code segment (Col. 7 Ln. 5 – 29), execute a direct program flow control instruction if the current processing mode is the privileged processing mode (Col. 6 Ln. 39 – 45), and execute an indirect program flow control instruction if the current processing mode is an unprivileged processing mode (Col. 6 Ln. 5 – 26). Also see the rejection of claim 1.

Conclusion

14.   The prior art made of record and not relied upon is considered pertinent to

applicant's disclosure.

U.S. Pat. No. 6,735,703 B1 to Kilpatrick et al. Directed to intrusion detection system

using system call software wrapper.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Charles E Anya whose telephone number is (703) 305-

3411. The examiner can normally be reached on M-F (8:30-6:00) First Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, An Meng-Ai can be reached on (703) 305-9678. The fax phone number for

the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

Charles E Anya
Examiner
Art Unit 2126

cea.

MENG-AL I. AN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100